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Committee on the Peaceful
Uses of Outer Space

Implementation of an integrated, space-based global natural disaster management system

Note by the Secretariat*

Addendum

Contents

		Paragraphs	Page
I.	Introduction	1-2	2
II.	Replies received from Member States		2
	Canada		2

* The present document contains information received from Member States between 17 January and 19 April 2001.

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I. Introduction

1. At its forty-third session, the Committee on the Peaceful Uses of Outer Space agreed that, in accordance with the first year of the three-year work plan entitled "Implementation of an integrated, space-based global natural disaster management system", the Scientific and Technical Subcommittee at its thirty-eighth session should review the types of natural disasters being faced and the extent of the application of space-based services being utilized for their mitigation.[1]

2. The Committee also took note of the agreement of the Working Group of the Whole of the Subcommittee that the Secretariat should invite Member States and international organizations to submit to the Subcommittee at its thirty-eighth session information on the subject to be discussed at that session (A/AC.105/736, annex II, para. 41). The information submitted by Member States and international organizations as at 16 January 2001 is contained in the note by the Secretariat of 24 January 2001 and addendum (A/AC.105/753 and Add.1). The present document contains information submitted by a Member State between 17 January and 19 April 2001.

II. Replies received from Member States

Canada

1. On 20 October 2000, the Canadian Space Agency (CSA) joined the European Space Agency (ESA) and the Centre nationale d'études spatiales (CNES) of France in signing the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (the "International Charter on Space and Major Disasters"), further expanding Canada's ability to provide timely information to countries in distress. Mac Evans, President of CSA, described the Charter as a far-reaching humanitarian initiative that would lead to the coordination and global positioning of space resources, such as Canada's renowned Synthetic Aperture Radar Satellite (RADARSAT)-1, providing timely and critical imaging to agencies directing rescue and relief efforts in times of natural and technological disasters.

2. As at 1 November 2000, countries mobilizing rescue and relief efforts to deal with natural or technological disasters can dial a dedicated telephone number to access quickly the space resources of CSA, CNES and ESA. Those space resources include the coordinated use of Earth observation satellites like RADARSAT, the Satellite pour l'observation de la Terre (SPOT), the European Remote Sensing satellite (ERS) and soon the Environmental Satellite (Envisat) and ground facilities to produce data imaging. Other satellites supporting telecommunications, telemedicine and navigation provide additional support and may help, for example, in the positioning of floating booms in the case of an oil spill. The three space agencies will name a project manager who will maintain constant contact throughout the crisis with the requesting country, relief agency or organization while

[1] *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 20* (A/55/20), para. 119.

coordinating the effective deployment of those space resources. The available assistance offered to requesting agencies will also include the treatment and interpretation of the satellite imaging. When launched, the Artemis and Stentor telecommunications satellites will add to the space resources, enhancing the relay of satellite data to agencies and organizations on the ground.

3. Assistance was provided in a first joint operation following a major landslide in Slovenia on 17 November 2000. Signatories of the International Charter again dispatched their Earth observation satellites to capture images of the devastation caused by the January 2001 earthquake in El Salvador. The combination of the Charter signatories' resources is providing emergency rescue organizations with imaging that is captured day and night and in all weather conditions.

4. RADARSAT-1's frequent revisit period and beam flexibility allow users to monitor an area reliably under emergency conditions. Services associated with the RADARSAT programme, such as emergency programming, near-real-time data processing and electronic delivery, allow response agencies to receive data and assess emergency areas quickly during periods of crisis.

5. Canada actively contributed to rescue and relief efforts prior to joining the International Charter. During the Mozambique flooding of spring 2000, Canada's Earth observation satellite took images demonstrating the extent of flooding. CSA, together with RADARSAT International, Inc., the Canada Centre for Remote Sensing and the Department of National Defence, made available the data gathered by RADARSAT-1 to the Mozambican authorities to facilitate the management of humanitarian aid efforts and the evacuation of flood victims. A satellite image acquired on 1 March 2001 by RADARSAT-1 clearly showed the flooding along the Limpopo River to Xia Xia in southern Mozambique. The image was acquired using RADARSAT's Standard 7 beam, which nominally covers an area of 100 km by 100 km with a resolution of 25 metres.

6. RADARSAT-2, Canada's next-generation Earth observation satellite, currently under construction by MacDonald Dettwiler and Associates and scheduled for launch in early 2003, will further increase Canada's ability to provide precise imaging to meet the evolving needs of clients while fulfilling its Charter commitment to relief agencies and disaster management organizations.

7. Canada will also continue to support the efforts of the Disaster Management Support Group—operating under the umbrella of the Committee on Earth Observation Satellites—which has worked extensively to support improved utilization and coordination of Earth observation satellite data over the years.